

A1
~~3. (Amended) The method according to claim 1, wherein the non-single crystalline silicon film comprises an amorphous silicon film [the metal element is an interstitial element].~~

~~4. (Amended) The method according to claim [1] 2, wherein the non-single crystalline silicon film comprises an amorphous silicon film [a concentration of the metal element in the film is 1×10^{15} atoms cm^{-3} to 5×10^{19} atoms cm^{-3}].~~

A2
~~5. (Amended) A method of manufacturing a semiconductor device, comprising the steps of:~~

~~selectively introducing a metal element for promoting [accelerating] crystallization of silicon into an amorphous silicon film by solution application;~~

~~irradiating the amorphous silicon film with laser light [or strong light,] to produce a crystalline silicon film from the amorphous silicon film using the metal element; and~~

~~subjecting the crystalline silicon film to a heat treatment.~~

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~~7-9 under 6~~
10. (Amended) The method according to claim 6, wherein the irradiating step is performed [in a state that] while the crystalline silicon film is heated to 450 to 600°C.

~~5. (Amended) A manufacturing method of a semiconductor device, comprising the steps of:~~

~~[in a state that] disposing a catalyst element [for accelerating] or a compound including the catalyst element in contact with an amorphous~~

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Sub D3
silicon film by solution application, wherein said catalyst element or compound including the catalyst element promotes crystallization of [an] the amorphous silicon film [or a compound thereof is held in contact with the amorphous silicon film],

[imparting crystallinity to] crystallizing the amorphous silicon film using the catalyst element or compound including the catalyst element by irradiating it with laser light [or strong light]; and

subjecting [a crystallinity-imparted] crystallized silicon film to a heat treatment.

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14. (Amended) A manufacturing method of a semiconductor device, comprising the steps of:

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applying, to an amorphous silicon film, a solution in which a catalyst element for promoting [accelerating] crystallization of the amorphous silicon film is dissolved or dispersed; [and]

[improving] increasing crystallinity of the silicon film using the catalyst element by irradiating the silicon film [it] with laser light [or strong light]; and

heating the silicon film in which the crystallinity has been increased.

(iv) canceled

17. (Amended) A manufacturing method of a semiconductor device, comprising the steps of:

A5
Sub D5
applying, to an amorphous silicon film, a polar solvent in which a compound of a catalyst element for promoting [accelerating] crystallization of the amorphous silicon film is dissolved or dispersed;

[imparting crystallinity to] crystallizing the silicon film using the catalyst element by irradiating it with laser light [or strong light]; and

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subjecting [a crystallinity-imparted] crystallized silicon film to a heat treatment.

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18. (Amended) The method according to claim 17, wherein the solution includes one or a plurality of polar solvents selected from the group consisting of water, alcohol, acid and ammonia [water].

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21. (Amended) A method of manufacturing a semiconductor device, comprising the steps of:

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[the first step of] introducing a metal element for promoting [accelerating] crystallization of silicon into an amorphous silicon film by solution application;

[the second step of] irradiating the amorphous silicon film with laser light to crystallize it using the metal element [or strong light];

[the third step of] subjecting the crystallized silicon film to a heat treatment; and

repeating the second and third steps two or more times in total.

22. (Amended) A method of manufacturing a plurality of thin-film transistors on a substrate having an insulative surface, comprising the steps of:

forming an amorphous silicon film on the substrate having the insulative surface;

selectively introducing a metal element for promoting [accelerating] crystallization of silicon into the amorphous silicon film by solution application so that the metal element is brought in contact with a surface of the amorphous silicon film; [and]